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Higher-Order Fertility Among Urban Fathers

An Overlooked Issue for a Neglected Population

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The study includes a longitudinal sample of 1,989 fathers from the Fragile Families and Child Wellbeing study and examines factors associated with fathering a higher-order birth (three or more children) and compares these factors to those predicting any subsequent birth. Also, the article examines differences by marital status. Logistic regression analyses indicate the likelihood of fathering a higher-order birth is greater among more disadvantaged men in urban contexts, those with lower levels of education, the unmarried, minorities, and those exhibiting higher levels of depressive symptomology. This suggests that the men likely to be least prepared to father large numbers of children have an elevated probability of having a higher-order birth. This study provides continuing evidence that several aspects of men's lives in urban contexts have important influences on their decisions to have a higher-order birth, and suggests that policies or programs that address fertility issues should include fathers where and when feasible.

Keywords: *higher-order fertility; men; subsequent birth*

Although a large body of research has developed over the past three decades that identifies the predictors of first, and in some cases higher-order, births to mothers (for an extensive review see Coley & Chase-Lansdale,

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1998), the factors associated with higher-order births (defined as three or more births) specifically for *men* have received minimal research attention. The circumstances and determinants of men having multiple children are not well known despite the potential positive implications of these births (e.g., social capital) as well as the potential negative implications for fathers, couples, and children, due to concerns about resource dilution (Bianchi, 2000; Blake, 1981; Downey, 2001; Schoen, Young, Nathanson, Fields, & Astone, 1997). Moreover, concerns about father involvement in the lives of children (Parke, 2002), the growing numbers of children born out-of-wedlock (Bianchi, 2000) and multiple-partner fertility (Mincy, 2003) suggest an urgent need to more fully understand and examine patterns and predictors of higher-order fertility among unmarried as well as married men. An understanding of the factors associated with male fertility behaviors in general, especially higher-order births, is part of a larger gap in the fertility literature. In particular, although ethnographic work on men in low-income urban communities has shown that the normative and behavioral climate in which men live often influences their fertility behaviors and encourages having sex and even children with multiple partners (Anderson, 1999), there are no studies that identify the correlates of higher-order fertility for men in such contexts. In short, there is no explanation for what may drive men in urban contexts who are already fathers to have a subsequent or higher-order birth.

Given the limited research on higher-order fertility for men, this study extends the existing research literature by using the Fragile Families and Child Wellbeing study to address two research questions:

Research question 1: What factors are associated with fathers transitioning to a third or higher-order birth and do they differ from factors associated with transitioning to any subsequent birth?

Research question 2: Are there differences by marital status in the factors associated with the transition to a third or higher-order birth for fathers?

We focus on third or higher-order births for two reasons: (1) The transition to a second birth is largely a normative process with completed fertility in the United States ranging between 1.8 and 2.3 children per family (Sell & Kunitz, 1997), and larger families are defined as including three or more children (Rodgers, Cleveland, van den Oord, & Rowe, 2000; Ryder, 1986; Sell & Kunitz, 1997); and (2) There are "resource dilution" concerns associated with men having many children (Blake, 1981; Downey, 2001).

Our first research question allows us to assess whether different factors influence the transition to a large number of children (3 or more) as opposed to any subsequent child. Essentially, this analysis examines the transition to another birth by father's parity at baseline, comparing those with only one child at baseline to those with at least two children at baseline. For those fathers with only one child at baseline, the transition to a subsequent birth represents a transition to a second birth, which is the normative number of children in the United States (Sell & Kunitz, 1997). We expect there to be differences in the two models because the presence of children in a family decreases intentions to have subsequent children, and this relationship is significantly stronger for parents who already have at least two children than it is for parents with only one child (Schoen et al., 1997). Our second question focuses solely on predictors of *third* or higher-order births.

Literature Review

Higher-Order Fertility Among Males

Until recently, fertility from men's point of view has been all but ignored, with little data being collected from or about men, in part because of suspected inaccuracies and underestimates in the reporting of fertility and family formation behaviors among males (Bachrach, Evans, Ellison, & Stolley, 1992; Cherlin, Griffith, & McCarthy, 1983; McCarthy, Pendleton, & Cherlin, 1989). In addition, considerably more fertility research on men has been conducted among male *teens* than among older males (Sonenstein, 1999, 2000; Sonenstein, Ku, & Pleck, 1997), although there are high rates of births in the young adult years. Men are capable of fathering subsequent children at older ages than women, emphasizing the need to examine the correlates of higher-order births for men of all ages. Moreover, the only studies that attempt to examine the factors associated with higher-order fertility focus on children's place within the family, for instance, the desire to have a second child so that the first child will not be an only child (Blake, 1981), wanting children of each gender (Pollard & Morgan, 2002; Yamaguchi & Ferguson, 1995), or the need to have children to solidify a marriage (Griffith, Koo, & Suchindran, 1985).

An understanding of the factors associated with men's transitions to higher-order births is important because of its potential consequences for children, couples, and fathers. There are divergent views in the literature about the implications of higher-order births for families. On one hand,

some researchers view the presence of many births as a positive form of social capital, perceiving siblings as resources (Schoen et al., 1997) or the presence of many children as reducing "life course uncertainty" (Bronte-Tinkew & DeJong, 2004; Friedman, Hechter, & Kanazawa, 1994). Some studies also suggest that children with at least one sibling are better able to negotiate social relationships and have improved quantitative skills (Downey & Condron, 2004; Phillips, 1999). On the other hand, parental resources, especially those offered by fathers, are diminished with higher-order births because additional children dilute the total quantity of time, attention, and material goods and possessions any one child receives (Bianchi, 2000). Accordingly, children in larger families may have diminished academic achievement (Blake, 1981), verbal ability, and educational attainment (Alwin, 1991), net of socioeconomic controls (Blake, 1989).

Although higher-order births to fathers may have both positive and negative implications, when these births occur outside of marriage they may have additional negative consequences. Children do best when they grow up with two married biological parents in a low-conflict relationship (McLanahan & Sandefur, 1994). Births to unmarried fathers often represent births within a *fragile relationship* (nonmarried, noncohabiting, lower relationship quality), and children born into such relationships face a high risk of father absence throughout their lives. Father absence and reduced father–child contact are associated with a higher risk of problematic outcomes for children (Hetherington & Henderson, 1997; McLanahan & Sandefur, 1994), and nonmarital births are associated with fewer resources available to children. Higher-order births within marital relationships that experience conflict place a couple at risk of dissolving their relationship (Demaris, 2000) and place their children at risk of compromised development (Jekielek, 1998). Thus, the consequences for fathers and children of additional births, particularly births outside of marriage, are many and an understanding of the determinants associated with the process of higher-order fertility for men is well warranted.

Norms and Fertility-Related Behaviors in Urban America

Ethnographic research conducted in urban contexts suggests two models of fatherhood (Anderson, 1999). One model of fathers in urban contexts suggest that there is a general concern about male irresponsibility and sexual infidelity that some describe as men "rippin and running the streets" (Edin, 2000; Wilcox & Wolfinger, 2007), and a general permissive attitude toward premarital sex and nonmarital childbearing. Some studies also

suggest that the strategy of securing as many sexual conquests as possible and having sex with multiple partners is especially prevalent among African American men in urban America (Anderson, 1999; Youm, 2004). This body of research suggests that a permissive attitude toward sex and nonmarital childbearing may contribute to a culture and norms that encourage sexual behaviors that lead to higher levels of nonmarital childbearing (Ellwood & Jencks, 2004), and these norms attach little moral significance to bearing larger numbers of children even if out of wedlock (Edin, 2000). The fertility-related behaviors of these men have been described as representing a reproductive underclass as they deviate from, and are less receptive to, middle-class norms regarding childbearing (Jencks & Mayer, 1990); consequently, these differences in norms may contribute to higher-order fertility among men in urban contexts.

The other model of fatherhood in urban contexts, also based on the work of Anderson (1999) and other ethnographers, suggests a "code of decency" in urban contexts, where sexual fidelity persists and there are norms regarding traditional sexual morality and sexual behavior (Anderson, 1999; Tolnay, 1997). In this tradition, sexual intercourse and childbearing outside of marriage is considered sinful because children deserve two parents who are committed to them and to one another, and as such the concept of monogamy is upheld (Browning & Clairmont, 2007). These norms may contribute to a strong commitment to sexual fidelity and the avoidance of sexual promiscuity, reducing the likelihood of higher-order fertility outside of marriage. These two opposing norms of fatherhood provide a backdrop for understanding distinct models of fertility behaviors and fatherhood that are found in urban America and that are likely to influence men's higher-order fertility.

Factors Associated With the Transition to a Higher-Order Birth

Given that most of what we know about the factors associated with fertility is generally derived from research on women or, less frequently, male adolescents, we borrow heavily from the body of research on women and male teens to inform our hypotheses about whether these factors may be associated with higher-order fertility for urban fathers. On the basis of available research, we posit that there are four main sets of factors that are likely to be associated with the risk of men transitioning to a higher-order birth: (1) family-of-origin characteristics, (2) individual father characteristics,

(3) attitudes and knowledge about fathering, and (4) the mother–father relationship.

Family-of-Origin Characteristics

Family structure. Growing up in a single-parent family and having experienced higher numbers of family structure transitions are associated with an earlier age at childbearing and, therefore, a higher likelihood of having a greater number of children over the life course (Albrecht & Teachman, 2003; Capaldi, Crosby, & Stoolmiller, 1996; Wu & Martinson, 1993). Researchers posit that individuals who witness their parents having relationships with several partners may feel that monogamy is not important and sexual involvement with multiple partners is acceptable (reinforcing the street model of fathering), possibly leading to early sexual activity and higher rates of childbearing (Anderson, 1990; Axinn & Thornton, 1996). This may be especially pertinent in low-income urban communities that tend to have large proportions of female single-parent households and higher father absence (Edin & Kefalas, 2005).

Father involvement in the family of origin. In studies of female adolescents, research suggests that an involved biological father may serve as a protective factor against high fertility because high levels of father involvement lead to better parental monitoring and control, both of which are linked to delayed sexual activity and childbearing and a lower likelihood of a higher-order birth (Ellis et al., 2003; McLanahan, 1999).

The presence of a father figure. The presence of a father figure (biological or social father) while growing up is associated with a decreased risk of early pregnancy and teen childbearing, as well as delayed pubertal development, suggesting that not only is a biological father important in determining fertility behaviors, but also the presence of a nonbiological father figure is protective (Ellis et al., 2003; Keddie, 1992; McLanahan, 1999). Although there is some evidence that the presence of a nonbiological father is associated with higher premarital fertility compared to single parenting, these studies have been conducted primarily with female samples (Wu, 1996; Wu & Martinson, 1993).

Overall, we argue that family-of-origin factors may influence males' risk for higher-order births over the life course and we hypothesize the following:

Hypothesis 1: Urban men from disadvantaged families of origin with a single parent, with low levels of father involvement, and without a father figure present will have an increased likelihood of having a higher-order birth.

Individual Father Characteristics

Age of father. At older ages, men have been exposed to a longer period at risk of childbearing. Thus, it is likely that both the odds of fathering at least one child and the total number of children ever fathered will increase with men's age (Spingarn & DuRant, 1996; U.S. Census Bureau, 2004); therefore, older fathers are more likely to experience a higher-order birth.

Race and ethnicity. It is well documented that racial and ethnic minorities are more likely to have closely spaced, higher-order births (Gillmore, Lewis, Lohr, Spencer, & White, 1997; Zhu, Rolfs, Nangle, & Horan, 1999). For example, in some low-income urban contexts, research suggests that the strategy of having sex with multiple partners may contribute to higher births for African American males (Anderson, 1999), consistent with a model of street fathering for such men. Furthermore, research shows a greater likelihood of higher-order fertility and large family size specifically among Hispanic families (Giachello, 1994; G. Marin, 1989) because the Hispanic culture tends to give preference to a large family size (G. Marin, 1989; Unger & Molina, 1997).

Foreign-born status. Foreign-born males have higher fertility rates than men who are native born (Bachu, 1996; U.S. Census Bureau, 2004); this is true for both married and unmarried men. Birth rates among foreign-born men may reflect cultural values that emphasize the importance of family and may lead to a larger number of higher-order births (G. Marin, 1989; Unger & Molina, 1997).

Educational attainment. Higher levels of educational attainment have been found to be associated with fewer total pregnancies (Unger & Molina, 1997), perhaps because additional years of education delay childbearing until a later age, thereby decreasing the risk of bearing a large number of children (Pears, Pierce, Kim, Capaldi, & Owen, 2005). Among men, the highest birthrates have been reported among those with less than a high school education (Bachu, 1996; U.S. Census Bureau, 2004), which suggests that there may be a larger number of higher-order births among less educated males. Urban men who are not committed to pursuing higher-education goals may also be less likely to adopt a responsible orientation toward reproductive issues (contrary to the decent model of fathering), resulting in higher levels of fertility and childbearing (Marsiglio, 1993).

Religiosity. Among adolescents, frequent church attendance and high levels of religiosity are linked to a later age at sex and lower odds of teen pregnancy and parenthood (Manlove, Terry-Humen, Ikramullah, & Moore, 2006;

Marsiglio, Ries, Sonenstein, Troccoli, & Whitehead, 2006; Rostosky, Wilcox, Wright, & Randall, 2004). For urban fathers, higher levels of religiosity may also be associated with sexual fidelity (Anderson, 1999) resulting in lower levels of childbearing and supporting the decent model of fathering. More frequent religious attendance, however, may also be associated with a preference for a larger number of children (Pearce, 2002).

Income. Indicators of socioeconomic status (SES) such as income have been found to be associated with male fertility, with less economically advantaged men typically having larger family sizes than those with more economic resources (Bachu, 1996). Also, working class individuals and those below the poverty line tend to have children at earlier ages than middle-class individuals, thus increasing the total number of years at risk of childbearing over the lifetime and the likelihood of higher-order births (Forste, 2002; Pears et al., 2005). Lower income may also be prevalent among men in urban contexts (Anderson, 1999) and has been ascribed to behaviors linked to street fathering as men enhance their masculinity and status within their subcultures (Anderson, 1999; Edin, 2000; Forste, 2006) by having children with multiple partners (Marsiglio, 1993).

Employment status. U.S. Census data indicate that men who participate in the labor force father fewer children than men who report having no job at all in the previous month (Bachu, 1996); therefore, the likelihood of a higher-order birth is lower for employed men. For low-income fathers in urban contexts, unemployment may contribute to a "code of the street" model of fatherhood, resulting in higher levels of childbearing.

Parity. Parity refers to the number of children fathered by one man or the number of live births a woman has had (McKinnon, 2004). Both males and females tend to decrease fertility based on the number of children they already have (Schoen et al., 1997).

Mental health (depression). Some studies suggest that males with mental health issues are more likely to engage in voluntary sexual intercourse (B.V. Marin, Coyle, Gomez, Carvajal, & Kirby, 2000) and to have multiple recent and lifetime sexual partners (Raj, Silverman, & Amaro, 2000), thereby increasing the likelihood of subsequent births over the life course. Low-income fathers in urban contexts may also be likely to have higher levels of depression (Bronte-Tinkew, Moore, Matthews, & Carrano, 2007), and this may result in risky sexual behaviors and higher levels of childbearing.

Substance and drug use. Substance use is linked to an increase in a number of risky sexual behaviors over the lifetime, including higher number of total sexual partners, more frequent sexual activity, and higher rates of unprotected sex (Capaldi, Stoolmiller, Clark, & Owen, 2002; Pears et al., 2005). Low-income fathers may also be likely to have a higher prevalence of substance use (Bronte-Tinkew et al., 2007), resulting in risky sexual behaviors and higher levels of childbearing, as consistent with the street model of fathering.

Hypothesis 2: Urban men who are older, racial and ethnic minorities (Hispanic or Black), foreign-born, of lower SES, more religious, unemployed, unmarried, at lower parities, depressed, and substance users are hypothesized to have an increased likelihood of a higher-order birth.

Father–Mother Relationship Context

Marital status. Across all economic and demographic groups, married individuals are more likely to have higher-order births than are individuals who are unmarried (Child Trends, 2002; NCHS, 2006). On the other hand, cohabiting couples have children more regularly than do couples who are either in visiting or other types of relationships but less regularly than do couples who are married (Manning, 2001; Rindfuss & Parnell, 1989). Individuals in other unmarried relationships (e.g., romantically involved, just friends, no relationship) are less likely than are cohabiting or married couples to have children (Musick, 2002).

Relationship support. Some research suggests that high-quality relationships foster stronger child intentions and couples in stronger, more positive relationships are more likely to want or attempt to have children (Stewart, 2002). In contrast, couples in unhappy or conflictual relationships are less likely to experience a subsequent pregnancy and more likely to wait an extended period of time between pregnancies compared to couples in relationships characterized by higher quality (Carlson, McLanahan, & England, 2004; Lillard & Waite, 1993). In accordance with the street model of fathering, in urban contexts, permissive attitudes toward relationships may contribute to sexual behaviors that lead to higher levels of nonmarital childbearing (Ellwood & Jencks, 2004), and little moral significance to bearing larger numbers of children, even if in fragile relationships (Edin, 2000). Thus, we hypothesize that

Hypothesis 3: Urban men in married relationships and in relationships with higher levels of support will have an increased likelihood of a higher-order birth, relative to their counterparts.

Attitudes and Knowledge of Fathering

Attitudes about being a father. Fatherhood readiness (Marsiglio, Hutchinson, & Cohan, 2001) is an important subjective aspect of male fertility and fathering. It captures the degree to which men feel prepared at a particular point in time to assume the varied responsibilities they associate with being a father. Recent studies suggest a correlation between father attitudes and intentions regarding parenting and men's fertility behaviors (Schoen, Astone, Kim, & Nathanson, 1999; Schoen & Tufis, 2003) and, presumably with the likelihood of a higher-order birth (Schoen et al., 1999).

Pregnancy intendedness. Fertility intentions have been found to be instrumental in influencing achieved fertility (Brown & Eisenberg, 1995). Positive fertility intentions are linked to a greater likelihood of a higher-order birth; this holds true for both men and women (Schoen et al., 1999).

Knowledge of the child support system. With regard to child support, policies that strictly enforce the payment of child support may increase fathers' costs of having children outside of marriage and may reduce the likelihood of additional births (McLanahan & Carlson, 2002). Therefore, unmarried men in urban contexts or men in unstable marriages who are knowledgeable about child support laws would be expected to be less likely to have a higher-order birth.

Hypothesis 4: Urban men who have positive attitudes toward the father role, report wanting a pregnancy and with less knowledge about child support laws are expected to have an increased likelihood of a higher-order birth.

Marital Status Differences in the Likelihood of a Higher-Order Birth

Couples in more committed relationships, such as marriage, are more likely than couples who are unmarried to desire a pregnancy and thus actively attempt to conceive a child (Moore, 1995; Pears et al., 2005; Stewart, 2002). Thus, we hypothesize that

Hypothesis 5: Factors predicting the transition to a higher-order birth may be different for fathers who are married versus those who are unmarried.

Data and Method

Data

We use data from the Fragile Families and Child Wellbeing study (Fragile Families), a national longitudinal survey that provides information on the

characteristics and relationships of fathers and mothers (McLanahan et al., 2001). Baseline survey data were collected between 1998 and 2000 for 4,898 families in 20 cities in the United States (McLanahan et al., 2001). The study includes 3,712 unmarried couples and 1,186 married couples who were interviewed at the birth of their child; further interviews with parents, including nonresident fathers, were completed when the child was 1-, 3-, and 5-years-old. These data are representative of births in U.S. cities with populations more than 200,000 (Carlson & Furstenberg, 2006).

Response-rate analyses indicate that the data are most representative of cohabiting fathers (90% response rate) and least representative of fathers who are less romantically involved with the child's mother at the birth of the child (38% response rate). Among fathers who are less romantically involved with the child's mother, the men who participated in the survey are a select group of men and represent those fathers who, given the tenuous mother–father relationship, are unusually committed to the child or the mother. Response rates indicate that at the end of the 1-year follow-up, 90% of unmarried mothers, 91% of married mothers, 70% of unmarried fathers, and 82% of married fathers who were eligible (i.e., had a completed baseline mother interview) were interviewed (Fragile Families, 2006).

Sample for analyses. We used data from the baseline, 12-month and 36-month waves of the Fragile Families study. A total of 2,966 fathers were interviewed in the baseline father survey and when the focal child was 3 years old. Of these, we eliminated 132 fathers who were missing on the dependent variable. We also eliminated 845 fathers who were not part of the nationally representative sample from one of the 16 cities in which respondents were selected by stratified random sampling.[1] Our final analytic sample includes 1,989 fathers.

Measures

Dependent variables. Our analyses consider two dependent variables, derived by comparing fathers' baseline reports of the number of biological children he had in addition to the focal child (i.e., his total number of children), with fathers' Year 3 reports of the number of children he had with both the mother of the focal child and with any other women. The main dependent variable is a dichotomous measure comparing fathers who reported a third or higher-order birth at Year 3 with those who reported no subsequent birth or a second birth. To address the first research question, this measure is assessed only for those fathers who had at least two children at baseline. The secondary dependent variable is a dichotomous measure

comparing fathers who transitioned to any subsequent birth between baseline and Year 3 with fathers who had no subsequent births (assessed for those fathers who had only one child at baseline).

Independent Variables

Mother–father relationship context. We included two measures of mother–father relationship: marital status at baseline (comparing those who were cohabiting and those in another type of relationship with those who were married) and relationship support. Relationship support is a five-item summative index (range: 0-10; $\alpha = .58$) measuring whether the focal mother is fair and willing to compromise, physically abusive, verbally abusive, expresses love or affection for the father, and encourages or helps him do things as perceived by and reported by the father. A higher score indicates a more supportive relationship between the mother and father.

Attitudes and knowledge about fathering. We included four measures of fathers' attitudes: attitudes about being a father, whether or not the father suggested an abortion when he found out the mother was pregnant with the focal child, and two items measuring knowledge of the child support system. Fathering attitudes is a 3-item summative index (range: 0-9; $\alpha = .72$) of the following items measured at baseline: "Being a father and raising children is one of the most fulfilling experiences a man can have," "I want people to know that I have a new child," and "Not being a part of my child's life would be one of the worst things that could happen to me." A higher score indicates a more positive attitude about fathering. Fathers' knowledge of the child support system was assessed via fathers' responses to the following baseline questions, "Can a judge make a father pay child support even if he wanted an abortion?" and "If a man gets a woman pregnant and doesn't want to marry her, how likely is it that he will be required to pay child support for the child?" For the first question, we compared answers of *no* and *don't know* to *yes*. For the second question, we compared fathers who were certain a father would be required to pay child support versus all other fathers.

Fathers' individual characteristics. We included six measures of fathers' individual characteristics, reported at the time of the baseline interview: age at birth of focal child[2]; race, ethnicity, and nativity (comparing foreign-born Hispanic, native-born Hispanic, non-Hispanic Black, and non-Hispanic fathers of Other race and ethnicity to non-Hispanic White fathers); educational attainment (comparing those with less than a high school degree and those with at least some college to high school graduates); religious attendance; income (in

tens of thousands of dollars); and whether the father did not work in the week prior to the focal child's birth.[3] The measure of religious attendance compared those who attended religious services at least weekly with those who attended less than weekly or not at all. Additional father characteristics included in our model are parity (focal child was the first child vs. focal child was at least the second child), depression, and substance use. We measure depressive symptomology using a subscale of the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). Depression is a dichotomous measure created from 12 items that indicate the way the respondent may have felt or behaved during the past week. Items include feeling bothered, poor appetite, feeling blue, having trouble concentrating, feeling depressed, feeling that everything was an effort, feeling fearful, sleeping restlessly, talking less than usual, feeling lonely, feeling sad, and feeling like you could not go on. Respondents who scored 28 or higher were coded as depressed (Radloff, 1977). Substance use is a 3-item summative index with one point for each of the following behaviors of participants during the 3 months before the baseline interview: smoking, drinking more than three drinks a day, and using drugs (range 0-3; $\alpha = .38$).

Fathers' family-of-origin characteristics. We included three measures of fathers' childhood family characteristics: whether the father lived with both of his biological parents at age 15, involvement level of the focal father's own biological father in raising him (*never knew father, not at all involved, somewhat/very involved*), and whether the focal father had a father figure other than his biological father while growing up.

Analytic Strategy

Our analyses proceeded in three stages. First, we examined bivariate associations between the dependent variables and fathers' family and individual characteristics, using *t* tests for continuous measures and chi-square statistics for categorical measures (tables available on request).

Second, in multivariate analyses, we used logistic regression models to examine which characteristics predict to fathers who transition to a *higher-order* birth (vs. not) and those that predict to the transition to *any* subsequent birth (vs. none), controlling for all independent variables. These logistic models are based on fathers' parity at baseline (comparing fathers with one child at baseline and fathers with two or more children at baseline). These analyses were designed to identify whether the factors that predict to any subsequent birth (usually a second birth, which is the normative fertility pattern) are different from those that predict to a higher-order birth, as little is known about these predictors in the extant research.

Third, we used logistic regression models to examine whether the factors that predict the transition to a *third or higher birth* are different for married and unmarried men, controlling for all independent variables.

Results

Sample Characteristics

Table 1 describes characteristics of our sample of fathers. Approximately 20% of the men fathered a higher-order birth (3+) between baseline and 36 months, and 39% fathered any subsequent child during this time period. Among fathers with only one child at baseline, none transitioned to a higher-order birth by 36 months; therefore, all subsequent births for this subsample of men represent a transition to a second birth. Nearly one third (32%) of fathers in our sample were married to the biological mother of the focal child at baseline, whereas 43% were cohabiting with the focal mother and 25% had another type of relationship with the focal mother. On average, fathers reported receiving relatively high relationship support (8.5 out of 10) from the focal mother. On average, fathers in our sample were 28 years old at the birth of the focal child. (Bivariate results available by request.)

Multivariate Results

Question 1: What factors are associated with fathers transitioning to a higher-order birth and do they differ from factors associated with transitioning to any subsequent birth?

Table 2 presents the results of the logistic regression analyses for the first research question. Being in a cohabiting relationship with the focal mother at baseline was important only for predicting the transition to a higher-order birth. Relative to married fathers who had at least two children at baseline, cohabiting fathers had nearly twice the odds of fathering a higher-order birth (odds ratio [OR] = 1.97). In contrast, having a relationship classified as "other" with the focal mother, compared to being married to the focal mother, operated in opposite directions for fathers with one child at baseline versus those with at least two children at baseline. Among fathers with one child, being in an other relationship (vs. married) was associated with 44% reduced odds of fathering a subsequent birth, whereas among fathers with at least two children, being in an other relationship (vs. married) was associated with 63% higher odds of fathering a higher-order birth (OR = 0.56 and OR = 1.63, respectively).

(text continues on p. 19)

Table 1
Characteristics of Biological Fathers, Based on Fragile Families Baseline, 12- and 36-Month Surveys

	Total (N = 1,989)	Father Had One Child at Baseline (n = 917)	Father Had Two or More Children at Baseline (n = 1,072)	Father Married at Baseline (n = 630)	Father Not Married at Baseline (n = 1,359)
Fathered a higher-order birth (more than 3 children) between baseline and 36 months					
No	80.3%	100.0%	63.4%	85.0%	78.1%
Yes	19.7%	0.0%	36.6%	15.0%	21.9%
Fathered a subsequent birth between baseline and 36 months					
No	61.2%	58.7%	63.4%	62.3%	58.4%
Yes	38.8%	41.3%	36.6%	37.7%	41.6%
Mother–father relationship (baseline)					
Marital status with focal mother					
Married	31.7%	26.3%	36.3%	—	—
Cohabiting	43.1%	45.6%	41.0%	—	—
Other	25.2%	28.1%	22.8%	—	—
Relationship support from focal mother (range: 0-10)	8.52	8.58	8.47	8.77	8.41
Attitudes about fathering and knowledge of child support (baseline)					
Attitudes about being a father (0-9)	8.27	8.32	8.22	8.39	8.21
Suggested an abortion for focal child	8.1%	8.3%	8.0%	2.1%	11.0%
Can judge make father pay child support even if father wanted an abortion?					
No	6.1%	5.6%	6.5%	5.0%	6.6%
Yes	74.7%	73.8%	75.9%	75.9%	74.5%
Don't know	18.9%	20.6%	17.6%	19.2%	18.9%

(continued)

Table 1 (continued)

	Total ($N = 1,989$)	Father Had One Child at Baseline ($n = 917$)	Father Had Two or More Children at Baseline ($n = 1,072$)	Father Married at Baseline ($n = 630$)	Father Not Married at Baseline ($n = 1,359$)
Certain that a father will be required to pay child support if he gets a woman pregnant and doesn't want to marry her	50.1%	46.8%	53.8%	47.3%	52.1%
Individual father characteristics (baseline)					
Age at birth of focal child (range: 15-67)	27.95	25.52	30.02	31.80	26.10
Race and ethnicity					
Hispanic, foreign born	8.9%	9.0%	8.9%	8.8%	9.0%
Hispanic, native born	18.4%	20.0%	17.1%	12.9%	21.0%
Non-Hispanic White	27.4%	30.1%	25.2%	51.3%	16.4%
Non-Hispanic Black	40.1%	35.0%	44.8%	19.4%	50.0%
Non-Hispanic Other	4.9%	5.9%	4.0%	7.6%	3.6%
Educational attainment					
Less than high school	29.9%	29.3%	30.4%	12.9%	37.8%
High school	35.9%	35.3%	36.4%	26.4%	40.3%
Some college or more	34.1%	35.3%	33.2%	60.7%	21.8%
Attends religious services at least weekly	19.6%	17.1%	21.8%	30.7%	14.5%
Income in year before baseline (in ten thousands)	4.24	4.42	4.09	5.98	3.29

(continued)

Table 1 (continued)

	Total (N = 1,989)	Father Had One Child at Baseline (n = 917)	Father Had Two or More Children at Baseline (n = 1,072)	Father Married at Baseline (n = 630)	Father Not Married at Baseline (n = 1,359)
Unemployed in week before birth of focal child Parity	16.5%	15.4%	17.6%	7.6%	20.7%
Focal child was first child	46.1%	100.0%	0.0%	38.3%	49.7%
Focal child was second or higher-order child	53.9%	0.0%	100.0%	61.8%	50.3%
Exhibits symptoms of depression	12.7%	12.7%	13.0%	7.0%	15.6%
Substance use in 3 months prior to baseline (range: 0-3)	91.0%	88.0%	94.0%	62.0%	105.0%
Childhood and family background (baseline)					
Lived with two biological parents at age 15	47.9%	49.9%	46.6%	67.8%	39.0%
Biological father involved in raising father					
Never knew father	6.2%	7.0%	5.5%	2.9%	7.7%
Not involved	22.9%	20.4%	25.1%	13.6%	27.3%
Somewhat/very involved	70.5%	72.6%	69.3%	83.5%	65.0%
Had no other father figure growing up	60.4%	59.8%	61.0%	70.3%	55.9%

Note: Categories may not sum to 100% due to rounding.

Table 2
Odds Ratios of Logistic Regression Analyses of the Likelihood That a Father Will Have a Subsequent Birth Between Baseline and 36 Months

	Transition to Any Subsequent Birth (Father Had One Child at Baseline; $N = 917$)	Transition to a Higher-Order Birth (Father Had Two or More Children at Baseline; $N = 1{,}072$)
Mother–father relationship (baseline)		
Marital status with focal mother		
Married (ref.)	(1.00)	(1.00)
Cohabiting	0.69	1.97***
Other	0.56*	1.63*
Relationship support from focal mother (range: 0-10)	1.09	1.07
Attitudes about fathering and knowledge of child support (baseline)		
Attitudes about being a father	0.99	0.96
Suggested an abortion for focal child	0.97	0.75
Can judge make father pay child support even if father wanted an abortion?		
No	0.99	1.14
Yes (ref.)	(1.00)	(1.00)
Don't know	1.34	1.04
Certain that a father will be required to pay child support if he gets a woman pregnant and doesn't want to marry her	0.84	1.16
Individual father characteristics (baseline)		
Age at birth of focal child (range: 15-67)	0.99	0.98*
Race and ethnicity		
Hispanic, foreign born	1.37	0.52*
Hispanic, native born	0.87	0.94
Non-Hispanic White (ref.)	(1.00)	(1.00)
Non-Hispanic Black	1.24	1.11
Non-Hispanic Other	1.00	0.98
Educational attainment		
Less than high school	1.27	1.40*
High school (ref.)	(1.00)	(1.00)
Some college or more	0.81	1.10
Attends religious services at least weekly	1.48*	1.35

(continued)

Table 2 (continued)

	Transition to Any Subsequent Birth (Father Had One Child at Baseline; $N = 917$)	Transition to a Higher-Order Birth (Father Had Two or More Children at Baseline; $N = 1{,}072$)
Income in year before baseline (in ten thousands)	1.05	0.95
Did not work in week before birth of focal child	1.31	1.37
Parity		
Focal child was first child (ref.)	—	—
Focal child was second or higher-order child	—	—
Exhibits symptoms of depression	1.28	1.67*
Substance use in 3 months prior to baseline (range: 0-3)	1.13	0.96
Childhood and family background (baseline)		
Lived with two biological parents at age 15	0.87	1.25
Biological father involved in raising father		
Never knew father	1.27	0.93
Not involved	0.81	1.43
Somewhat/very involved (ref.)	(1.00)	(1.00)
Had no other father figure growing up	1.03	0.99

Note: Table compiled on the basis of data from Fragile Families baseline and 36-month surveys. Ref = Reference category for that variable.
*$p < .05$. ***$p < .001$.

Age and being of foreign-born Hispanic race and ethnicity (vs. non-Hispanic White) were both negatively associated with fathering a higher-order birth (OR = 0.98 and OR = 0.52, respectively), but not with the transition to any subsequent birth. The odds of fathering a higher-order birth were greater for those who had less than a high school education (compared with high school graduates; OR = 1.40) and for those who exhibited more depressive symptoms (OR = 1.67). Attending religious services at least weekly (compared with attending religious services less than weekly; OR = 1.48) was related to greater odds of fathering a subsequent child.

Question 2: Are there differences by marital status in the factors associated with the transition to a higher-order birth for fathers?

Table 3
Odds Ratios of Logistic Regression Analyses by Marital Status of the Likelihood That a Father Will Have Third or Higher-Order Birth Between Baseline and 36 Months

	Father Married at Baseline (N = 630)	Father Not Married at Baseline (N = 1,359)
Mother–father relationship (baseline)		
Marital status with focal mother		
Married (ref.)	—	—
Cohabiting	—	1.39*
Other	—	(1.00)
Relationship support from focal mother (range: 0-10)	1.25*	1.00
Attitudes about fathering and knowledge of child support (baseline)		
Attitudes about being a father	0.90	0.95
Suggested an abortion for focal child	1.77	0.76
Can judge make father pay child support even if father wanted an abortion?		
No	1.43	0.83
Yes (ref.)	(1.00)	(1.00)
Don't know	0.93	0.89
Certain that a father will be required to pay child support if he gets a woman pregnant and doesn't want to marry her	1.38	1.20
Individual father characteristics (baseline)		
Age at birth of focal child (range: 15-67)	1.04*	1.04***
Race and ethnicity		
Hispanic, foreign born	0.38	0.99
Hispanic, native born	0.59	2.00**
Non-Hispanic White (ref.)	(1.00)	(1.00)
Non-Hispanic Black	1.42	2.24**
Non-Hispanic Other	0.44	1.91
Educational attainment		
Less than high school	1.78	1.37
High school (ref.)	(1.00)	(1.00)
Some college or more	0.93	0.94
Attends religious services at least weekly	1.58	1.23
Income in year before baseline (in ten thousands)	0.88*	0.93
Unemployed in week before birth of focal child	2.44*	1.18
Exhibits symptoms of depression	0.63	1.85**
Substance use in 3 months prior to baseline (range: 0-3)	1.05	1.11
Childhood and family background (baseline)		
Lived with two biological parents at age 15	0.93	1.07
Biological father involved in raising father		
Never knew father	0.70	0.92
Not involved	1.01	1.55*
Somewhat/very involved (ref.)	(1.00)	(1.00)
Had no other father figure growing up	1.04	1.03

Note: Table compiled on the basis of data from Fragile Families baseline and 36-month surveys.
*p < .05. **p < .01. ***p < .001.

Table 3 indicates that regardless of marital status, age at birth of focal child was associated with increased odds of fathering a third or higher-order birth (OR = 1.04). Among unmarried fathers, being in a cohabiting relationship (vs. another type of relationship) was associated with greater odds of fathering a higher-order birth (OR = 1.39). Relationship support from the focal mother was an important predictor of fathering a higher-order birth for the married subgroup only. Married men who reported higher levels of relationship support had greater odds of fathering a higher-order birth than those who reported lower levels of relationship support (OR = 1.25).

For unmarried fathers, being native-born Hispanic or non-Hispanic Black (vs. non-Hispanic White) was associated with increased odds of fathering a higher-order birth (OR = 2.00 and OR = 2.24, respectively). Among married fathers, income was negatively associated and unemployment was positively associated with fathering a higher-order birth. Exhibiting symptoms of depression and having an uninvolved biological father were associated with increased odds of fathering a higher-order birth among unmarried fathers only (OR = 1.85 and OR = 1.55, respectively).

Discussion

Using data from the Fragile Families and Child Wellbeing study, this study had two goals: (a) to examine the factors associated with the transition to a third or higher-order birth for urban fathers and whether they differ from the factors associated with transitioning to any subsequent birth and (2) to determine whether the factors associated with the transition to a third or higher-order birth for fathers differ by marital status. Given the scarcity of research on male fertility, the effects of fathers' family-of-origin characteristics, individual father characteristics, attitudes about fathering, and the mother–father relationship were hypothesized to be factors contributing to the likelihood of a higher-order birth.

Factors Predicting a Higher-Order Birth and Any Subsequent Birth

Overall, with regard to our first research question, there were more factors predicting to a higher-order birth than to any subsequent birth. We found support only for the hypothesis that individual father characteristics and the father–mother relationship predict to subsequent births among urban men. Being unmarried, younger at the birth of the focal child, having less

than a high school education, and being depressed were all associated with greater odds of having a higher-order birth. Being foreign-born Hispanic was associated with lower odds of a higher-order birth. As expected, there were few factors associated with the transition to a subsequent (or second) birth. This is not surprising given that a second birth is a very normative experience in the United States and, therefore, it is unlikely to be influenced by particular personal characteristics.

Our findings indicate that higher-order fertility is more likely among urban men of lower SES (measured using education), supporting classic microeconomic theory, which suggests that the desire for a larger number of children may be lower among those of higher means, even though individuals with more economic resources would be better able to financially support a large number of children (Becker, 1960). This finding is also consistent with other literature on disadvantaged status and higher fertility (Bachu, 1996; Forste, 2002; Pears et al., 2005; U.S. Census Bureau, 2004; Unger & Molina, 1997). Given that this is primarily an urban sample, this finding supports ethnographic research in such contexts, which suggests that a permissive attitude toward sex among men in low-income communities may contribute to a street culture of childbearing and norms that contribute to sexual behaviors lead to higher levels of childbearing (Ellwood & Jencks, 2004) among disadvantaged urban men. The finding about lower education may also reflect the fact that fewer years of education for men decrease the opportunity costs of starting a family and accelerate childbearing, thereby increasing the total number of years at risk of fathering children (Schoen et al., 1997). Lower education may also reflect worse contraceptive use among men or their partners, increasing the likelihood of a higher-order birth.

Father's age was inversely associated with the likelihood of a higher-order birth. This finding may reflect that men who became fathers at an early age are more likely to have a subsequent birth because they have been exposed to a longer period at risk of childbearing or may not yet be at a point of completing fertility (Spingarn & DuRant, 1996; U.S. Census Bureau, 2004). We also found that men with higher levels of depressive symptoms had a greater likelihood of a higher-order birth. We speculate that depression may be a proxy for more risky sexual behaviors among males that may reduce the likelihood of contraception, leading to a higher-order birth.

Surprisingly, we found that higher-parity fathers who were foreign-born Hispanic, compared with non-Hispanic White, had reduced odds of fathering a higher-order birth. It is unclear why this effect exists for foreign-born Hispanics. Some new research done on multiple-partner fertility (Logan, Manlove, Ikramullah, & Cottingham, 2006), however, suggests that differences

in marital and fertility patterns may exist between immigrant and native-born men, thereby increasing the likelihood of subsequent births for some racial and ethnic subgroups and not for others (Carlson & Furstenberg, 2005; Guzzo & Furstenberg, 2006). These cultural differences across Hispanic groups may account for this unexpected finding.

Finally, the likelihood of a higher-order birth was greater among cohabiting and other unmarried men, supporting the street model of fathering. Prior research suggests that cohabitation tends to be less stable than marriage and is somewhat ambiguous in terms of accompanying roles and expectations (Cherlin & Furstenberg, 1994). Such role ambiguity and uncertainty for men about their level of responsibility for an additional child may decrease the costs of additional children and, consequently, increase the likelihood of higher-order childbearing. These findings mirror recent research on multipartnered fertility that indicates that unmarried men who are not in formal relationships are increasingly likely to have subsequent births (Carlson & Furstenberg, 2006).

Only two factors—marital status and religious attendance—were associated with fathers having any subsequent birth. Among men who had only one child at baseline, those who attended religious services at least weekly had increased odds of fathering another birth by Year 3, suggesting that two-child families are especially normative in more religious families (Manlove, Logan, Moore, & Ikramullah, 2008). In addition, we found that not being married to or cohabiting with the mother of the focal child (vs. being married) at baseline was associated with lower odds of fathering another birth. Given that these men only had one child at baseline, they clearly do not have a history of multiple-partner fertility and, perhaps, are averse to multiple-partner fertility and, therefore, are more likely to avoid subsequent births than are the men who had at least two children at baseline, some of whom probably had a history of multiple partner fertility.

Surprisingly, we found no support for the hypothesis that family-of-origin/family background characteristics influence subsequent births for men. The lack of a significant finding may signal that a second birth is largely normative and, therefore, the transition to having multiple children is not significantly influenced by one's family of origin. We also found no associations between knowledge and attitudes about fathering and a subsequent birth. The lack of findings about child support suggests that men's decisions to have or not have additional children are not predicated on concerns about child support laws. We were surprised to find no effects of fathering attitudes, but perhaps the measures we used lacked sufficient variation to capture differences in the outcome.

Differences by Marital Status in the Transition to a Third or Higher-Order Birth

For our second research question, we examined how the factors associated with the transition to a third or higher-order birth vary for married and unmarried men. These analyses revealed some interesting findings about higher-order fertility transitions and men's marital status in urban contexts. We found that unmarried men who were cohabiting had greater odds of fathering a third or higher-order birth than men who were not cohabiting. Again, this runs counter to the fertility behaviors suggested by the code of decency model of fathering, which posits that norms promoting traditional sexual morality and behavior would reduce the likelihood of higher-order fertility among unmarried men (Anderson, 1999; Tolnay, 1997). Higher-order fertility in cohabiting unions may be explained in part by the frequency of sexual intercourse, which generally tends to be higher among cohabitors (Sonenstein, Pleck, & Ku, 1992).

We found that unmarried fathers who reported higher levels of depressed symptomology had greater odds of fathering a higher-order birth. This finding corresponds with prior research showing that, compared to men with good mental health, those with poor mental health tend to engage in sexual intercourse more often and to have multiple lifetime sexual partners (B. V. Marin et al., 2000; Raj et al., 2000), putting them at greater risk of fathering more children.

The finding that Black unmarried men are more likely to have a higher-order birth may reflect the lower SES and poorer employment prospects of unmarried Black urban males that contribute to higher-order fertility behaviors (Mott, Hurst, & Gryn, 2007). This finding underscores that there are unique dynamics associated with the culture of family formation among unmarried African American urban males. These results also join other research on urban family life that documents male irresponsibility and sexual infidelity as prevalent among African American men in urban America (Anderson, 1999) and is suggestive of a code of the street that attaches little moral significance to out-of-wedlock childbearing and sexual fidelity (Anderson, 1999; Edin, 2000; Forste, 2006), resulting in higher levels of nonmarital childbearing, as is also the case here. The finding about being an unmarried native-born Hispanic and having a higher likelihood of a higher-order birth reflects prior research suggesting that Hispanics tend to have higher overall birthrates, compared with non-Hispanic Whites (Giachello, 1994), which is likely a reflection of cultural values that emphasize the importance of family and may lead to a larger number of

higher-order births (G. Marin, 1989; Unger & Molina, 1997). This may also reflect a downward assimilation to the streetlike culture chronicled by some scholars (Portes, Fernandez-Kelly, & Haller, 2005).

In addition, unmarried fathers whose own biological fathers were not involved in raising them had greater odds of fathering a higher-order birth, compared with fathers who were raised by their own biological fathers. This finding corroborates other research suggesting that a lack of father involvement is associated with less parental monitoring and control, which in turn are associated with riskier sexual behaviors (Ellis et al., 2003; McLanahan, 1999) and, consequently, would be linked with a greater likelihood of transitioning to a higher-order birth. Intergenerational trends in family formation also may lead to more subsequent births as a result of role modeling in the family of origin (Wu & Martinson, 1993). In low-income urban communities where high levels of nonmarital childbearing may contribute to higher numbers of single-parent households and households in which fathers are less involved (Anderson, 1999; Edin & Kefalas, 2005), such role modeling may be more likely to occur. In this case, unmarried urban fathers who themselves did not have involved fathers choose to have a higher-order birth.

Among *married* men, those who reported higher levels of relationship support from the mother of the focal child had greater odds of fathering a higher-order birth. These findings confirm that higher levels of relationship supportiveness among married couples in urban contexts is important, as individuals who feel supported by their partners are more likely to eventually desire children with that partner (Carlson et al., 2004; Stewart, 2002). This conforms with the code of decency model of fathering in urban contexts (Anderson, 1999; Tolnay, 1997), where a strong commitment to sexual fidelity and the avoidance of sexual promiscuity increases the likelihood of higher-order fertility within marriage. These findings also corroborate previous research on relationships that suggests that married couples with less conflict in their relationships are more likely to report subsequent childbearing (Myers, 1997).

Interestingly, but not surprisingly, we found that for married fathers, higher income was associated with a reduced likelihood of a higher-order birth. For higher-income married individuals, the economic costs of additional children are important; thus, such fathers are less likely to go on to have another child. On the other hand, we found that unemployed fathers had a greater likelihood of having a higher-order birth. If unemployment is used as a proxy for SES, then findings point to a disturbing trend of higher-order fertility among men of lower means in urban contexts (Mott et al.,

2007). This finding mirrors prior research on fertility behaviors among disadvantaged urban males (Anderson, 1999). It could be because married, unemployed fathers are less concerned about the impact of childbearing on their careers and so go on to have an additional child. This finding supports the justification for considering the social value of children as an important motivator of subsequent childbearing for males.

Limitations of the current study. There are some limitations of this study that should be noted. First, the Fragile Families data lack detailed fertility histories on fathers and their relationship history with previous partners, preventing us from including measures of mother characteristics because we could not determine the identity of the mother of each subsequent child, nor would we have information on their characteristics unless it was the same mother as that of the focal child. Second, we only had information on current marital status, whereas a complete marital history would have been more useful for the analyses because early marriage likely predicts higher-order fertility and marital disruption can interrupt the family-building process, leading to fewer births. Third, this sample is one of births and cannot be generalized to all men, but rather to fathers of a recent birth cohort living in urban areas. Thus, the generalizability of findings to men in small cities and in rural contexts should not be made. Fourth, we used fathers' reports of their fertility and we recognize that fathers' reports of their fertility may be underreported, especially for younger, unmarried, and nonresident men (Mott et al., 2007). Fifth, these findings should be considered in relation to the sample characteristics. Finally, we could not include the gender composition of existing children in our models because the gender of each previous birth was not reported, although we acknowledge that gender preferences are important predictors of higher-order births for couples. The role of biological factors, such as medical sterilization and age-related infecundity, is also not considered. Because the sample was small, we could not explore the factors associated with a higher-order nonmarital births and determine whether these births were with the same partner versus another. However, this is a potentially important avenue for future work, as is an analysis of community-level factors and how they contribute to a higher-order birth. Given the limited information currently available on male fertility, our focus has been on documenting the factors associated with the transition to a higher-order birth. However, future research on family size and child development could pay closer attention to the social and cultural contexts of fertility. Research conducted by Parcel and Dufur (2001) indicated that children in large families who are also religious do just as well academically as children in smaller families. Future researchers may want to consider

possible interactions between family size and family environment when studying the effects of family size on child development.

Contributions of present study. Despite these limitations, the current study has many strengths and improves our understanding of male higher-order fertility behaviors in several important ways. Using data from men in a nationally representative data set, we are able to document those characteristics that are associated with fathers' higher-order fertility. Such information is notably absent from the current body of fertility research literature, which focuses mainly on female fertility or, in the rare cases that do address male fertility, on male adolescents. Our study, however, provides data on the higher-order fertility of fathers of all ages. Another strength is that our study provides evidence of multiple and varied links between individual and relationship factors and male fertility outcomes, using information from fathers themselves. Prior studies of male fertility have often relied on mothers' reports of fathers' fertility behaviors. Using information that fathers themselves provide about their behaviors is an advantage of our study because the information is expected to be more accurate.

Summary and policy implications. We found that the likelihood of fathering a higher-order birth is greater among more disadvantaged men in urban contexts, those with lower levels of education, the unmarried (including cohabiting), minorities, and those exhibiting higher levels of depressive symptomology. This corresponds closely to the code of the street model of fathering and suggests that the men likely to be least prepared to effectively father large numbers of children appear to have an elevated probability of having a higher-order birth. Not only are unstable and disadvantaged men more likely to have a higher-order birth, but higher-order fertility in the context of limited resources is correlated with negative health and risk behaviors such as depression, substance use, and unemployment (Bronte-Tinkew et al., 2005). Thus, children of men who father a large number of children not only face potential resource dilution but may also be at risk for lower well-being because their fathers are more likely to be disadvantaged and to experience risk factors such as unemployment and depression. In terms of policy implications, our study provides evidence that fathers' characteristics are important factors in determining fertility outcomes. If the transition to a higher-order birth for disadvantaged and unstable men is perceived as a source of concern because of the potential negative consequences for child well-being, then policies and programs that focus on fertility may want to ensure they incorporate males into their programs. Consequently, programs that address male fertility should educate young

men about the potential negative ramifications of fathering many children, starting when males are young. At the same time, however, such programs should be sensitive to cultural issues and differences across racial and ethnic groups that may encourage large families.

Notes

1. These 845 cases that were not included in the sample were more likely than fathers in the analytic sample to have not experienced a subsequent birth, to be neither married or cohabiting with the mother of the focal child, to be Black or a foreign-born Hispanic, and to have received less than a high school education. We ran the analyses both with and without these cases and there were no differences in the results, illustrating that the omission of these cases did not bias our findings.

2. Father's age at first birth would be a preferable measure of exposure to risk of childbearing, but these data unfortunately were not collected.

3. We included primarily unchanging characteristics as predictors, to avoid problems of causal ordering. In several instances, we assume that current patterns are long-term, for example, frequency of religious attendance.

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